

WHAT IS CLAIMED IS:

1. An image processing apparatus which executes image processing for a radiographical image obtained by converting, into an electrical signal, an intensity
5 distribution of radiation that is radiated to an object and has passed through the object, comprising:
defining means for defining a gray level conversion curve to be used for gray level conversion on the basis of a contrast of the image after gray
10 level conversion of the radiographical image; and
gray level conversion means for converting a gray level of the radiographical image by using the gray level conversion curve defined by said defining means.
2. The apparatus according to claim 1, wherein said
15 defining means defines the gray level conversion curve on the basis of a contrast improvement factor defined by the gray level conversion curve.
3. The apparatus according to claim 2, wherein to
define the gray level conversion curve, the defining
20 means calculates the contrast improvement factor by fixing the contrast of the gray level conversion curve and translating the gray level conversion curve on a coordinate system whose abscissa represents an input pixel value and whose ordinate represents an output
25 pixel value.
4. The apparatus according to claim 2, wherein to define the gray level conversion curve, the defining

means calculates the contrast improvement factor by changing the contrast of the gray level conversion curve and translating the gray level conversion curve on a coordinate system whose abscissa represents an input pixel value and whose ordinate represents an output pixel value.

5 The apparatus according to claim 1, wherein said defining means defines the gray level conversion curve on the basis of the contrast of a specific image region of the object after gray level conversion.

6. The apparatus according to claim 1, wherein said defining means defines the gray level conversion curve on the basis of the contrast of a predetermined region of the object after gray level conversion.

15 7. An image processing method of executing image processing for a radiographical image obtained by converting, into an electrical signal, an intensity distribution of radiation that is radiated to an object and has passed through the object, comprising:

20 an analysis step of defining a gray level conversion curve to be used for gray level conversion on the basis of a contrast of the image after gray level conversion of the radiographical image; and
 a gray level conversion step of converting a gray level of the radiographical image by using the gray level conversion curve defined in the analysis step.

8. An image processing program which executes image

processing for a radiographical image obtained by
converting, into an electrical signal, an intensity
distribution of radiation that is radiated to an object
and has passed through the object, characterized by
5 causing a computer to execute:

an analysis step of defining a gray level
conversion curve to be used for gray level conversion
on the basis of a contrast of the image after gray
level conversion of the radiographical image; and

10 a gray level conversion step of converting a gray
level of the radiographical image by using the gray
level conversion curve defined in the analysis step.

9. A storage medium which stores an image processing
program which executes image processing for a
15 radiographical image obtained by converting, into an
electrical signal, an intensity distribution of
radiation that is radiated to an object and has passed
through the object, wherein the image processing
program causes a computer to execute:

20 an analysis step of defining a gray level
conversion curve to be used for gray level conversion
on the basis of a contrast of the image after gray
level conversion of the radiographical image; and

a gray level conversion step of converting a gray
25 level of the radiographical image by using the gray
level conversion curve defined in the analysis step.